
A New Species of *Palicourea* (Rubiaceae, Psychotrieae) from Southern Brazil

Charlotte M. Taylor

Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299, U.S.A.

ABSTRACT. The new species *Palicourea australis* C. M. Taylor is described and illustrated. This new species is distinguished from *P. marcgravii* A. St.-Hilaire by its shorter corollas with dense external pubescence that is confined to the tube and corolla lobes with appendages or pronounced thickenings.

During study of Brazilian *Palicourea* Aublet for the "Phanerogamic Flora of São Paulo State" project, the following well-marked species was discovered to be undescribed, due largely to confusion in the identities of previously described species. As circumscribed by Taylor (1997), *Palicourea* is distinguished within the Rubiaceae by its persistent stipules that are united around the stems into a continuous sheath and bilobed in the interpetiolar portion; generally colored inflorescences with the flowers usually pedicellate; corollas that are usually brightly colored, usually five-lobed, and have well-developed tubes that are somewhat swollen at the base and glabrous internally except for a dense ring of pubescence situated just above this basal swelling; and drupaceous fruits with usually two pyrenes. This Neotropical genus includes about 200 species found from sea level to high montane regions. The species are typically distylous and apparently pollinated by hummingbirds.

Palicourea australis C. M. Taylor, sp. nov. TYPE: Brazil. Paraná: Mpio. Mangueirinha, Cachoeira, 6 Dec. 1989, G. Hatschbach & V. Nicolack 53679 (holotype, MBM; isotype, MO-4224516). Figure 1.

Haec species a *Palicourea marcgravii* corollae tubo extus velutino-pubescente et lobulis incrassationes projecturasve abaxiales gerentibus distinguitur.

Flowering 0.7 m tall, to 2 m tall; stems terete, glabrous to puberulous. *Leaves* paired; blades elliptic to narrowly so, 6–17 × 2–6.5 cm, at apex acute to somewhat acuminate, at base acute to cuneate, papyraceous, adaxially and abaxially glabrous to minutely puberulous, often more densely so along costa; secondary veins 6 to 10 pairs, extending to near margins but not uniting with them, with 1(to 3) weak to well-developed intersecondary veins

usually present between pairs of secondary veins, adaxially costa prominulous and remaining venation plane to a little thickened, abaxially costa prominulous to prominent, secondary veins prominulous, and reticulated minor venation sparse, plane to thickened; margins thinly to distinctly cartilaginous, minutely ciliolate; *petioles* 3–7 mm long, glabrous to puberulous; *stipules* puberulous to glabrescent, persistent at least with the leaves, united around the stem into a continuous truncate sheath 0.2–1 mm long, lobes narrowly triangular to somewhat lanceolate, 3–7 mm long, acute to acuminate or bidentate. *Inflorescences* terminal, erect, with peduncles 3.5–11.5 cm long; panicles shortly pyramidal to somewhat corymbiform, 2.5–8.5 × 3–6 cm excluding corollas, with 4 to 6 pairs of developed secondary axes, these often subopposite to alternate, with flowers pedicellate in cymules of 3 to 7; bracts entire to ciliolate, those subtending secondary axes triangular, 0.5–6 mm long, acute, those subtending pedicels deltoid to narrowly triangular, 0.3–1 mm long, acute; pedicels 1–4 mm long; peduncle, axes, bracts, and pedicels puberulous to glabrescent, red; *flowers* distylous, with hypanthium cylindrical to turbinate, ca. 1 mm long, glabrous to puberulous; *calyx* limb puberulous to usually glabrous, divided nearly to base, lobes ovate to deltoid or shortly trilobed, 0.8–1.1 mm long, acute to cuspidate, entire to laciniate; *corolla* tubular, yellow on tube and pink to purple on lobes, a little swollen at base, generally straight at base and in tube, externally densely pubescent on tube with stout trichomes 0.3–1 mm long, glabrous on lobes, internally glabrous except for a sparsely pilosulous ring ca. 1 mm wide at ca. 2 mm above base, tube 8–11 × ca. 2.5–4 mm, lobes triangular, 1.5–2 mm long, acute, thickened and shortly involute adaxially at apex, abaxially with a thickened and rounded appendage to 0.5 mm long; *anthers* in short-styled form ca. 4 mm long and partially exerted, in long-styled form ca. 3 mm long and positioned ca. 2/3 of length of corolla tube above base; *stigmas* in short-styled form ca. 2 mm long and positioned ca. 2/3 of length of corolla tube above base, in long-styled form ca. 1 mm long and exerted; disk ca. 1–1.2

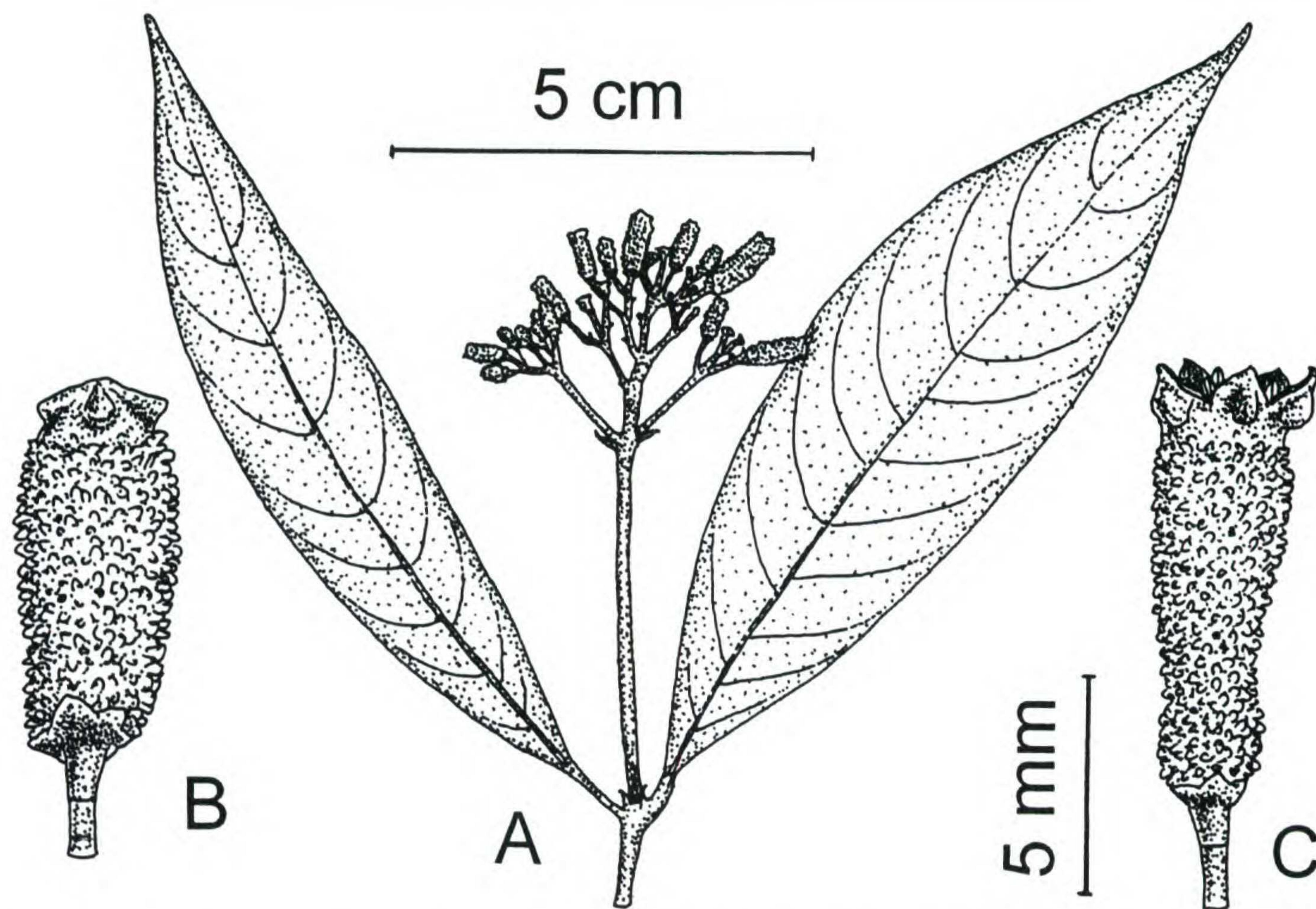


Figure 1. *Palicourea australis* C. M. Taylor, based on Lindeman & de Haas 3796 (NY). —A. Branch with inflorescence. —B. Flower bud before anthesis. —C. Flower at anthesis. B, C to same scale.

mm high, bipartite. *Infructescences* similar to inflorescences or with axes often more spreading, color not observed; *fruit* ovoid, ca. 4.5×5 mm, somewhat flattened laterally, glabrous or glabrescent, red; pyrenes with 3 to 5 low rounded longitudinal ridges and the surfaces verruculose. [Subg. *Palicourea*, sect. *Crocothyrsae* Grisebach, series *Croceae* (Müller Argoviensis) K. Schum., subser. *Subcymosae* (Müller Argoviensis) C. M. Taylor.]

Distribution, phenology, and habitat. In moist *Araucaria*, pine, gallery, and lakeside forests at 700–1000 m. Collected in flower in December, January, and February, in fruit in January.

This species is distinguished by its calyx lobes, which are often lacinate or shortly trilobed, corollas that are externally densely pubescent with stout trichomes on the tube but, in contrast, glabrous on the lobes, corolla lobes with pronounced thickenings or knobs on the abaxial portion, and clearly bipartite disk. Its infrageneric classification is based on the system of Taylor (1997). This new species is similar in corolla characters to *Palicourea nitidella* (Müller Argoviensis) Standley of the Amazon basin; *P. nitidella* can be distinguished from *P. australis* by its secondary leaf veins that are arranged in 8 to 17 pairs and plane on their adaxial

surfaces, petioles 5–30 mm long, calyx lobes obtuse and entire to shortly ciliolate, and corolla tubes 11–14 mm long. *Palicourea australis* and *P. nitidella* are completely allopatric in their distributions. This new species is also similar to *Palicourea marcgravii*, which is found from southern Venezuela to São Paulo and Minas Gerais States in Brazil and thus also allopatric. *Palicourea marcgravii* can be distinguished from *P. australis* by its stipule lobes 1–3 mm long; corollas that are moderately to densely puberulous to short-pilosulous on the exterior with the pubescence similar on the tube and lobes; corolla tubes 12–18 mm long; corolla lobes 2.5–3 mm long that are not thickened or appendaged abaxially; and fruits $5.5\text{--}7 \times 5.5\text{--}8$ mm. *Palicourea australis* has incorrectly been treated previously under the name “*Palicourea platypodina* Muell. Arg.” (e.g., Smith & Downs, 1956), but that name is a synonym of *P. marcgravii* [Glaziou 8739, isotype of *P. platypodina*, K, photo of destroyed isotype in B (F Rockefeller neg. #623) MO]. Thus the geographic distribution given by Smith and Downs applies to the combined ranges of these two species, and is therefore inaccurate. *Palicourea australis* is one of the southernmost species of this genus, and the specific epithet refers to this southern range.

Few fruiting collections have been seen; these may have been confused with those of *Palicourea croceoides* Hamilton, which is apparently sympatric with *P. australis*. *Palicourea croceoides* is easily distinguished by its externally glabrous corollas.

In addition to the specimens listed below, two collections (Brito 105, R; Anonymous s.n., RB-183169) that may be from Rio de Janeiro have also been seen, but neither of them has a more precise collecting locality indicated. The lack of collections of *Palicourea australis* with a clearly indicated collecting locality in this state, together with the apparent absence of this new species from São Paulo state, makes its occurrence in Rio de Janeiro State doubtful.

Paratypes. BRAZIL. **Paraná:** Palmeira, Ceccatto & Horta Barbosa 28 (RB); Ponta Grossa (Lagoa Dourada), Dombrowski & Neto 7838 (NY); Ponta Grossa in valle fluminensis, Dusén 2516 (R); Serrinha, Dusén 7305 (K), Piranguara, Dusén 7793 (BM, NY); Desvio Ribas, Dusén 10879 (MO); Ponta Grossa opp., Dusén 15984 (MO); mpio. Bocaiuva do Sul, Passa Vinte, Hatschbach 10817 (UEC); mpio. Palmeira, Fazenda Santa Amélia, Hatschbach & Fontella 17685 (RB); São João do Triunfo, Hatschbach 17711 (NY); mpio. São Mateus do Sul, Vargem Grande, Hatschbach 23254 (RB); mpio. Ipiranga, Rio Capivari, Hatschbach 25841 (NY); mpio. Contenda, Serrinha, Hatschbach 30644 (NY); Ponta Grossa, Hoehne s.n. (SP-23300); mpio. São Mateus do Sul, BR-476, Km 152, Krapovickas & Cristóbal 39664 (K); mpio. São José dos Pinhães, Kummrow 763 (MO); mpio. Contenda, near Contenda, 25°40'S, 49°35'W, Landrum 2446 (NY); SE of Campo Novo, ca. 50 km W of Laranjeiras do Sul, Lindeman & de Haas 2905 (K, WIS); ca. 12 km N of Curitiba, Lindeman & de Haas 3796 (NY); Parque Santa Maria near Tamandaré, 15 km N of Curitiba, Lindeman & de Haas 3981 (NY); Catanduvas-Camargopolis, Pereira & Hatschbach 7771 (RB); Ponta Grossa, Vila Velha, Lagoa Dourada, Pereira & Hatschbach 8117 (RB); mpio. Iratí, Floresta Nacional de Iratí, 25°30'S, 50°40'W, Rauscher 386 (W); mpio. Ponta Grossa, Buraco do Padre, Ribas & Cordeiro

874 (BHCB); Rio do Santo, Schwacke 1379 (RB); São José dos Pinhais, vicinity of Curitiba, along Rte. BR-376, Tsugaru et al. B-2359 (MO, NY). **Santa Catarina:** without locality, Müller s.n. (RB-40162); Rio do Bugre, Caçador, Klein 3419 (NY); Campo Novo, Mafra, Klein 3823 (NY); ao Leste como ao Oeste da Serra Geral, Müller 72 (R); ao Leste da Serra Geral (Rio Mameuhas[? illeg.]), Müller 173 (R); ERF km 145, Itaiópolis, Reitz & Klein 11474 (NY); Marombas, Campo Novo, Reitz & Klein 14245 (NY); Itaiópolis, Reitz & Klein 17374 (NY); mpio. Lajes, between Palmeiras and Lajes, Smith & Klein 8071 (NY, R); mpio. Papanduva, N of the Serra Geral on Estrada de Rodagem Federal Km 178 ERF, Smith & Klein 8404 (K, NY); mpio. Campo Erê, 6 km W of Campo Erê, 26°22'S, 53°06'W, Smith & Klein 13714 (R); mpio. Catanduvas, 17–19 km W of Joaçaba, ca. 27°03'S, 54°45'W, Smith & Klein 13942 (MO, WIS); mpio. Ponte Serrado, near Ponte Serrado, 94 km W of Joaçaba, 26°52'S, 52°05'W, Smith & Klein 14006 (NY); mpio. Água Doce, 18 km S of Rio Chapecó, Smith et al. 15710 (NY); São Bento do Sul, estrada para Corupá, 26°15'19.7"S, 49°26'31.1"W, Stehmann et al. 1725 (BHCB, UEC).

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